WHAT IS CLAIMED IS :

1. An acoustic apparatus comprising;

attenuator means for attenuating a first audio signal supplied thereto to produce a second audio signal,

low pass filter means for reducing high frequency components of the second audio signal obtained from the attenuator means to produce a third audio signal,

differential amplifier means operative to produce a fourth audio signal corresponding to a difference between the first and third audio signals supplier thereto, and

speaker means supplied with the fourth audio signal obtained from the differential amplifier means,

wherein a cutoff frequency of the low pass filter means is selected to be not lower than 2kHz and not higher than 6kHz and attenuation of the first audio signal in the attenuator means is so selected that a listener who intends to listen to reproduced sound obtained from the speaker means is able to recognize a virtual sound source position in front of and at a level higher than an actual position of the speaker portion.

2. An acoustic apparatus according to claim 1, wherein said attenuator means is constituted with a variable attenuator by which the attenuation of the first audio signal is varied and said virtual sound source position is adjusted by changing the attenuation of the first audio signal.

3. An acoustic apparatus according to claim 1, wherein said

attenuator means is provided for attenuating each of left and right channel signals forming a stereo audio signal and supplied thereto as the first audio signal to produce the second audio signal containing the attenuated left and right channel signals, said low pass filter means is provided for reducing high frequency components of each of the attenuated left and right channel signals contained in the second audio signal to produce the third audio signal containing the left and right channel signals each reduced in its high frequency components, said differential amplifier means is provided to be operative to produce the fourth audio signal containing a left channel difference signal corresponding to a difference between the left channel signal contained in the first audio signal and the left channel signal reduced in its high frequency components and contained in the third audio signal and a right channel difference signal corresponding to a difference between the right channel signal contained in the first audio signal and the right channel signal reduced in its high frequency components and contained in the third audio signal, and said speaker means is provided to include a left speaker supplied with the left channel difference signal contained in the fourth audio signal and a right speaker supplied with the right channel difference signal contained in the fourth audio signal, and attenuation of the left channel signal and attenuation of the right channel signal in the attenuator means are so selected that the listener is able to recognize a virtual left sound source position in front of and at a level higher than an actual position of the left speaker and recognize also a virtual right sound source position in front of and at a level higher than an actual position of the right speaker.

4. An acoustic apparatus according to claim 3, wherein said attenuator means is operative to determine the attenuation of each of the left and right channel signals so that the following equations are satisfied:

$$SLO = (L \times ARR(z) - R \times ARL(z)) \diagup (ALL(z) \times ARR(z) - ALR(z) \times ARL(z))$$

$$SRO = (R \times ALL(z) - L \times ALR(z)) \diagup (ALL(z) \times ARR(z) - ALR(z) \times ARL(z))$$

$$L = SL \times BLL(z) + SR \times BRL(z)$$

$$R = SL \times BLR(z) + SR \times BRR(z)$$

wherein

SLO represents the amplified left channel difference signal,

SRO represents the amplified right channel difference signal,

SL represents the left channel signal,

SR represents the right channel signal,

ALL(z) represents an acoustic transfer function from the left speaker to a left ear of the listener,

ALR(z) represents an acoustic transfer function from the left speaker to a right ear of the listener,

ARL(z) represents an acoustic transfer function from the right speaker to the left ear of the listener,

ARR(z) represents an acoustic transfer function from the right speaker to the right ear of the listener,

BLL(z) represents an acoustic transfer function from the virtual left sound source position to the left ear of the listener,

BLR(z) represents an acoustic transfer function from the virtual left sound source position to the right ear of the listener,

BRL(z) represents an acoustic transfer function from the virtual right sound source position to the left ear of the listener, and

BRR(z) represents an acoustic transfer function from the virtual

right sound source position to the right ear of the listener.

5. An acoustic apparatus according to claim 4, wherein said attenuator means is constituted with a first variable attenuator by which the attenuation of the left channel signal is varied and a second variable attenuator by which the attenuation of the right channel signal is varied, and said virtual left sound source position is adjusted by changing the attenuation of the left channel signal and said virtual right sound source position is adjusted by changing the attenuation of the right channel signal.